Accelerated HAMP Approach

Hopi Arsenic Mitigation Project
Program Management Proposal
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Authority
Water protection and management is central to Hopi culture and ceremonies. A perception that drinking water is a commodity to levy liens upon is contrary to traditional Hopi thought. The Hopi tribal council, villages, and traditional leaders have expressed significant concern about borrowing money to pay for water infrastructure. The HUC (Hopi Utility Corporation) Board of Directors is committed to building and operating the proposed HAMP (Hopi Arsenic Mitigation Project) but very cautious about the debt burden obligation presented by a USDA Loan. The HUC Utility Director is assigned to investigate HAMP value engineering, cost saving and program management alternatives to minimize or eliminate the loan component of the project capital cost.

Challenge
Prior to Hopi Utility Corporation the tribe relied solely on Indian Health Service to perform all HAMP investigations, analysis and preliminary designs. IHS plays a vital role in assisting the village water systems in drinking water compliance and providing previous HAMP planning and design. The present principal obstruction to implementation of the HAMP is 5 years of unsuccessful attempts to prepare a satisfactory Preliminary Engineering Report to USDA standards.

Solution
Now HUC is fully operational they can perform their responsibility to complete the required preliminary engineering report, project final design and construction administration directly and more efficiently without redundant layers of interagency management and subcontracting. A clear and present opportunity exists to expedite the project more efficiently through appropriate re-assignment of project resources and direct responsibilities.

Severable Responsibility
Approximately 25% of the proposed Hopi Arsenic Mitigation Project pipeline improvements are located on the village side of the HAMP wholesale meter. I.H.S. is uniquely qualified through experience, institutional knowledge and designated responsibility to perform engineering design and construction administration within the village systems. The estimated construction cost for these segments to be adopted by the village water systems is approximately $ 1.8 Million. IHS should focus on the village segment of the HAMP.

The remainder of the proposed HAMP pipeline between the existing Turquoise Trail Wells and the wholesale meters is the exclusive responsibility of HUC. The estimated construction costs for the HUC operated transmission main segment is approximately $7.2 Million. SDWA TSA Grant and Hopi internal funding could potentially cover this amount.

HUC can complete the engineering and construction administration more efficiently ($0.6 M) than IHS ($2.5 M) on the wholesale segments.

Under the standard IHS, third party MOA style contract they are not accountable to HUC for design performance, schedule or budget. HUC is obligated to the tribe, villages and stake holders to perform the successful design and construction of the HUC wholesale transmission line segment on budget and schedule. HUC accepts this responsibility and proposes to manage the performance risk most effectively and efficiently through it's own program management and contracting resources.

Proposed Budget Responsibilities

HUC proposes a natural division of project resources and responsibilities based on the 2014 IHS PER Construction Costs. This summary eliminates some redundant overhead costs prior to HUC resource assignment and anticipated cost saving revisions in the final design.

HAMP Segment Engineering & Administration Costs — **HUC $600,000**

Completion of Revised PER
Geotechnical Report
Final Design
Final NEPA Modifications
Final Village RoW Agreements
Final Village Water Purchase Agreements
Construction Staking
Site Safety, Environmental & Cultural Protection Plans
Construction Contractor Procurement
Construction Administration
Field Observation, Daily progress verification
Compaction testing
Certified As-Built Drawings
Project Commissioning
Facilities Operation Plan
Asset Management Plan

HAMP Segment Power and Well Construction Costs — **HUC $1,400,000**

NTUA Electrical Power Transmission to Wells
Electrical Power Distribution to Pumps
Stand By Power Generation and Controls
Renewable Power Generation & Storage (Other Grant-Future Phase)
Well Pumps & Installation
Well Head Improvements
VFD and Controls

HAMP TRANSMISSION MAIN Construction Costs — **SDWA TSA $5.8 Million**

12 Inch Diameter Transmission Main
8 Inch Diameter Transmission Main
Horiz. Boring
Pavement Cut & Patch
Valves and Controls
Storage Tank

Village HAMP Connection Improvements Construction Costs — **IHS $2 Million**

6 Inch Diameter Transmission Main
4 Inch Diameter Transmission Main
Valves, Fittings Controls
Storage Tank
20 % Technical Services and Engineering Support Fees.

SUMMARY $ 9.8 Million

The proposed **Accelerated HAMP Approach** eliminates the need for USDA Loan/Grant, streamlines redundant inter-agency coordination and saves approximately $2 Million in unnecessary IHS subcontracting and overhead fees. It also shortens project delivery schedule and manages potential project risks inherent to other program management alternatives.

Thank you for your consideration and constructive review comments.

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